

In the Specification:

Please amend paragraph [0061] as shown.

[0061] FIG. 6 illustrates an embodiment of a scatterometry target 40 which is preferably patterned in a photoresist (hereinafter, "resist") layer of a sample 410 such as a wafer or substrate, the target 40 being a grating having a plurality of parallel elongated lines 48, each of the lines 48 having a lengthwise direction and a length 41 extending in the lengthwise direction. A plurality of gaps 47 are provided at intervals of the lines. The lines 48 are patterned to mimic features 49 of the sample, having a width 43 the same as the width 412 of line features 49 of the sample, and a pitch 42 of the lines 48 being the same as the pitch 422 of line features 49 of the sample. Thus, when the line features 49 of the sample 410 are patterned having a critical dimension width, the lines 48 of the grating 40 have width 43 at the same critical dimension. In a preferred embodiment, the ratio of the length to the width of the lines 48 is quite large, thus necessitating the gaps for stress relief. For example, the width of the lines for a representative current technology is a value between about one half and twice a critical dimension of 100 nm, i.e. between about 50 nm and 200 nm, while a typical length of the lines is about 50 μ m. Thus, the ratio of length to width is greater than 50 in this example, and is approximately 500. Each gap 47 has a length L_G 46. Gaps 47 are provided at periodic intervals 45 of the lines 48. The total width of the grating is indicated at 44. In the following description, the sample, wafer or substrate and the lines or line features thereof, while not specifically shown, are similar to that shown in FIG. 6.

Please amend paragraph [0063] as shown.

[0063] FIG. 7 illustrates another embodiment of a scatterometry target 50, preferably patterned in a resist layer of a sample such as a wafer or substrate (not shown). The dimensions of the grating are indicated at 51 and 52. The target 50 is a grating having a plurality of parallel elongated lines 57 having a lengthwise direction and a length 51 in the lengthwise direction. The lines 57 are patterned to mimic features of

the sample, having a width 54 being the same as the width of line features (not shown) of the sample, and a spacing 53 between the lines which is the same as the spacing between the line features of the sample. A plurality of connecting features are provided as bridges 58 which connect together at least adjacent pairs of lines. In a preferred embodiment, the bridges extend to a connect a multiplicity of the lines. The bridges extend in a direction transverse to the lengthwise direction of the lines 57, each bridge 58 having a length L_B equal to the spacing 53 between the lines 57. Each bridge 58 further has a width 56. The bridges are disposed at a plurality of positions along the length 51 of each line, preferably at periodic intervals 55 of the lines 57.

Please amend paragraph [0082] as shown.

[0082] An example of this principle is illustrated in FIG. 8. Another embodiment of a scatterometry target 100 is shown in FIG. 8 in which the target 100, being a grating, has a plurality of parallel elongated lines 60 patterned in a photoresist layer, the lines having a lengthwise direction and length 61 extending in the lengthwise direction. Gaps 70 are provided in the lines at periodic intervals 65, the gaps having length 66. The lines 60 are patterned to mimic features of the sample, having a width 64, being the same as the width of line features of the sample, and a pitch 63 of the lines which is the same as the pitch of line features of the sample. In addition, one or more bridges 69 are provided having a width 67 and are provided at periodic intervals 67_68 of the lines. The width of the grating is indicated at 62.

Please amend paragraph [0109] as shown.

[0109] In another embodiment, illustrated in FIG. 9, a scatterometry target 80 is provided in which the target, being a grating, has a plurality of parallel lines 76. Jogs 77 are provided in the lines at periodic intervals 75. The lines 76 are patterned to mimic features of the sample (not shown), having a width 74, being the same as the width of line features (not shown) of the sample, and a pitch 73 of the lines which is the same as the pitch of line features of the sample. The dimensions of the grating are indicated at 71 and 72. When jogs 76 are provided, as shown in FIG. 9, rather than breaks or

bridges, there is no net change in optical volume from the simple grating, so no change in line width reported by scatterometry is expected.